

NATURAL RESOURCES CONSERVATION SERVICE
MISSISSIPPI SOIL AND WATER CONSERVATION COMMISSION
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

September 4, 1998

To Individuals on Enclosed List:

SUBJECT: Unified Watershed Assessment for Mississippi

On June 25, 1998, information concerning the Clean Water Action Plan (CWAP), and more specifically, the Unified Watershed Assessment portion of the plan was mailed to you. James Palmer, Director of Mississippi Department of Environmental Quality (MSDEQ); Gale Martin, Executive Director, Mississippi Soil and Water Conservation Commission, and Homer Wilkes, State Conservationist, Natural Resources Conservation Service (NRCS) have been asked to jointly complete the Unified Assessment for Mississippi.

On July 13, 1998, an information meeting was held to discuss the Unified Assessment, and identify potential sources of readily available information that may be used for the assessment. A working group was assigned to the tasks of 1) making recommendations for information to be used in the assessment; 2) developing prioritization methods to use; and 3) preparing material for public dissemination. The group met on August 20, 27 and 31, 1998 to complete the assigned tasks. On September 3, a meeting with larger groups were held to give comments and consider the draft assessment and prioritization for public comment.

Each 8-digit unit was assessed based on the characteristics and conditions of waters within the overall health of the aquatic system using the following framework:

- | | |
|--------------|--|
| Category I | Watersheds in Need of Restoration |
| Category II | Watersheds Meeting Goals, Including those needing action to sustain water quality |
| Category III | Watersheds with Pristine/Sensitive Aquatic System Conditions on Land s administered by Federal, State, or Tribal Governments |
| Category IV | Watersheds with Insufficient Data To Make an Assessment. |

Enclosed for your consideration and comment is a description of the Unified Watershed Assessment process used to categorize the 8-digit Hydrologic Unit watersheds in the state and the resulting prioritization of those watersheds assessed as Category I.

**MISSISSIPPI
STATE TECHNICAL COMMITTEE**

Homer L. Wilkes, State Conservationist
USDA, Natural Resources Conservation Service
Suite 1321, Federal Building
100 West Capitol Street
Jackson, MS 39269

PHONE
965-5205
Fax: 965-4940
Email: hwilkes@ms.
nrcs.usda.gov

Mr. David Warrington, State Exec. Director
Attn: Steve Melton
USDA, Farm Service Agency
6310 I-56 North
P. O. Box 14995
Jackson, MS 39236-4995

965-4300
Fax: 965-4184

Mr. Gale Martin
Executive Director
Mississippi Soil and Water Conservation Commission
P. O. Box 23005
Jackson, MS 39225-3005

354-7845
Fax: 354-8628

Mr. Daryl Burney
President
Mississippi Association of Conservation Districts
P. O. Box 439
Coffeeville, MS 38922

675-2998
Fax: 675-2786

Mr. Karl P. Sidents
Forest Supervisor
USDA, Forest Service
Suite 1141, Federal Building
100 West Capitol Street
Jackson, MS 39269

965-5486
Fax: 965-5519

Mr. Daniel A. Johnson, P.E.
Chief, Plan Formulation Branch
U. S. Army Corps of Engineers
2101 North Frontage Road
Vicksburg, MS 39180-5191

631-5450
Fax: 631-5027

Mr. Jim Sledge
State Forester
Attn: Ronnie Myers
Mississippi Forestry Commission
301 N. Lamar Street, Suite 301
Jackson, MS 39201

359-2826
Fax: 359-1349

Mr. Wayne Watts
Environmental Coordinator
Mississippi Department of Wildlife, Fisheries, and Parks
P. O. Box 451
Jackson, MS 39205-0451

364-2000
Fax: 364-2008

Mr. Robert Seyfarth
Mississippi Department of Environmental Quality
P. O. Box 10385
Jackson, MS 39289-0385

961-5160

Mr. Calvin Lunceford
U. S. Fish and Wildlife Service
2524 S. Frontage Road #C
Vicksburg, MS 39180-5269

629-8816
Fax: 638-0128

Dr. Ronald L. Brown, Director
Attn: Michael Quart, State Leader, ANR Programs
Mississippi Cooperative Extension Service
P. O. Box 9601
Mississippi State, MS 39762

325-8737
Fax: 325-8407

Mr. David Walde, President
Mississippi Farm Bureau Federation
P. O. Box 1972
Jackson, MS 39215-1972

957-3200
Fax: 977-4808

Mr. James L. Cummins, Jr.
Executive Director
Delta Wildlife Foundation
P. O. Box 276
Stoneville, MS 38776

686-3370
Fax: 686-4780

Mr. Chip Morgan
Executive Vice President
Delta Council
P. O. Box 257
Stoneville, MS 38776

686-4041
Fax: 686-4045

Dr. Lester Spell, Commissioner
Attn: Mr. Rickey Gray
Mississippi Department of Agriculture and Commerce
P. O. Box 1609
Jackson, MS 39215

354-7050
Fax: 354-6290

Mr. Jim Newsome
Executive Vice President
Mississippi Cattlemen's Association
680 Monroe Street, Suite A
Jackson, MS 39205

354-8951
Fax: 355-7128

Mr. Vic Duvic
Audubon Society
1735 Wilhurst Street
Jackson, MS 39211

362-3058

Mr. Louie Miller
Sierra Club
Barnes Road
Canton, MS 39046

859-1054

Mr. T. Logan Russell
Delta Land Trust Association
P. O. Box 4384
Jackson, MS 39296

981-3865
Fax: 981-3864

Mr. Steve Corbitt
Mississippi Forestry Association
620 North State Street, Suite 201
Jackson, MS 39202-3398

354-4938
Fax: 354-4937

Mr. Bob Harris
Mississippi Projects Biologist
Ducks Unlimited
P. O. Box 9
Holcomb, MS 38940

227-8573
No fax

Dr. Leroy Davis, Dean
Division of Agriculture, Research Extension
and Applied Sciences
Alcorn State University
Lorman, MS 39096

877-6137
Fax: 877-6219

Mr. Pat Patterson
State Director
The Nature Conservancy
809 N. President
Jackson, MS 39215

355-5357

Mr. Ben Burkett
Mississippi Association of Cooperatives and
Miss. State FSA Committee
P. O. Box 22786
Jackson, MS 39225-2786

354-2750
Fax: 354-2777

Mr. Carey K. Travis, Sr.
President
Indian Springs Farmers Association, Inc.
9074 Old River Road
Petal, MS 39465

553-0900

Mr. Willard Jack, President
Mississippi Soybean Association
Route 1, Box 31
Cruger, MS 38924

247-1214

Ms. Maria Huffstatter
Executive Director
Mississippi Wildlife Federation
P. O. Box 1814
Jackson, MS 39205

353-6922
Fax: 352-3437

Mr. Scott Bruner
Executive Vice President
Mississippi Association of Realtors
555 Park Drive
Jackson, MS 39208

932-5241

Chief Phillip Martin, Tribal Chief
Attention: Kirk R. Morgan, Head
Agricultural Rural Development
Mississippi Band of Choctaw Indians
Tribal Office Building
P. O. Box 6010
Philadelphia, MS 39350

656-2070

Mr. Seth Dabney, President
Mississippi SWCS Chapter
P. O. Box 1157
Oxford, MS 38655

232-2976
Fax: 232-2915

Mr. Mike Wylie
U. S. Environmental Protection Agency
Region 4
Atlanta Federal Center
100 Alabama Street, S.W.
Atlanta, GA 30303-3104

(404) 562-9409
Fax: (404) 562-9343
Email: wylie.mike@
epamail.epa.gov

Mr. John A. Stanturf, Project Leader
U. S. Forest Service
Southern Hardwoods Laboratory
P. O. Box 227
County Road 288
Stoneville, MS 38776-0827

686-3164
Fax: 686-3195

Dr. Matt Römkan
Acting Director
USDA, Agricultural Research Service
National Sedimentation Laboratory
P. O. Box 1157
Oxford, MS 38655-1157

232-2940
Fax: 232-2915

Mississippi Soil and Water Conservation Commission
September 3, 1998
Board Members Present

Daryl Burney
Marc Curtis
Ross McGehee
Benny Goff
Bill Thomas
Paul Myrick
Mike Brinkley representing Lester Spell, Jr., Commissioner, Mississippi Department of
Agriculture & Commerce
Ronnie Myers representing James Sledge, Mississippi Forestry Commission
Homer Wilkes, State Conservationist - Natural Resources Conservation Service

Mississippi Association of Conservation Districts, Inc.
September 3, 1998
Board Members Present

Daryl Burney
Milton Starnes
Benny Goff
Max Miller
Cecil Reeves
Andy Roy Cotton
Paul Myrick
Coley L. Bailey
Harold E. Prather
Buck Falls
John Swayze
Bob Cato
Jack Winstead
John Oglesby
Marc Curtis
Ross McGehee
Bill Taylor
David Hill
Jim Simpson
Gale Martin

Unified Watershed Assessments and Restoration Priorities, Mississippi

UNIFIED WATERSHED ASSESSMENTS

The unified watershed assessments and watershed restoration priorities in Mississippi were cooperatively developed from participants representing various state and federal agencies. A working group consisting of staff representing Mississippi Department of Environmental Quality, Natural Resources Conservation Service and Mississippi Soil and Water Conservation Commission (1) gathered information to be used in the assessment, (2) made preliminary prioritization, and (3) prepared materials for public dissemination.

Unified watershed assessments were developed through a cooperative integration of existing assessment reports and processes using existing and appropriate data and information. Watersheds defined by the U.S. Geological Survey (USGS) 8-digit hydrologic units were used (see figure 1) for the evaluation and assessment process. The condition of the 8-digit watersheds was determined by aggregating assessments of smaller watersheds within. Because data is insufficient for most of the watersheds, the majority were placed in Category IV. Only those which have been currently targeted for work under various nonpoint source programs were placed in Category I. Nationally, the 8-digit hydrologic unit scale will serve as the common scale for reporting the results of watershed assessments as well as to help target resources. The State of Mississippi along with local stakeholder groups is implementing the Basin wide Management approach that will be used to assist in determining issues and setting water quality priorities across the state. It is realized that agency programs may be administered cooperatively or individually to address water quality and other natural resource goals. Once this process is complete, this report will be revised and all watersheds will be categorized using the following framework:

Category I - Watersheds in Need of Restoration. These watersheds do not now meet, or face imminent threat of not meeting, clean water and other natural resource goals. The following factors were considered in assessing category I watersheds:

- ▶ 8 -digit hydrologic unit watersheds containing Mississippi Department of Environmental Quality 303(d) impaired streams;
- ▶ 8-digit hydrologic unit watersheds containing Mississippi Nonpoint Source Management Program 319 Priority Watersheds;
- ▶ 8-digit hydrologic unit watersheds containing Natural Resources Conservation Service FY97 and FY98 Environmental Quality Incentives Program (EQIP) Priority Areas for Mississippi.

Category II - Watersheds Meeting Goals, Including Those Needing Action to Sustain Water Quality. These watersheds meet clean water and other natural resource goals and standards and support healthy aquatic systems. All such watersheds need the continuing implementation of base clean water and natural resource programs to maintain water quality and conserve natural resources. The following factors were considered in assessing category II

watersheds:

- ▶ 8 -digit hydrologic unit watersheds containing Mississippi Department of Environmental Quality 303(d) impaired streams;
- ▶ 8-digit hydrologic unit watersheds containing Mississippi Nonpoint Source Management Program 319 Priority Watersheds;
- ▶ 8-digit hydrologic unit watersheds containing Natural Resources Conservation Service FY97, FY98 and FY99 Environmental Quality Incentives Program (EQIP) Priority Areas for Mississippi.

Category III - Watersheds with Pristine or Sensitive Aquatic Systems Conditions on Lands Administered by Federal, State, and Tribal Governments. States and tribes work cooperatively with federal land managers to identify watersheds with exceptionally pristine water quality, drinking water sources, or other sensitive aquatic system conditions, which are located on lands administered by federal, state, or tribal governments.

Category IV - Watersheds with Insufficient Data to Make an Assessment. At the present time, these watersheds lack sufficient data, critical data elements, or the data density to make a reasonable assessment.

The 53 watersheds were classified as:

Category I - 6
Category II - 8
Category III - 1
Category IV - 39

Table 1 lists the categorization of the 8-digit hydrologic unit and figure 2 is a map of the categories. One category IV, watershed was also assessed as category III.

A map of the state of Mississippi divided into numerous small regions, each labeled with a unique number representing a Hydrologic Unit Code (HUC). The numbers are printed in black text within or near their corresponding regions. The map includes the coastline of the Gulf of Mexico to the west and south. At the bottom left, there is a scale bar labeled "SCALE 1:2210260" and "MILES" with markings from 0 to 50 miles. The overall style is a technical, black-and-white administrative map.

FIGURE 1

Mississippi HUCs

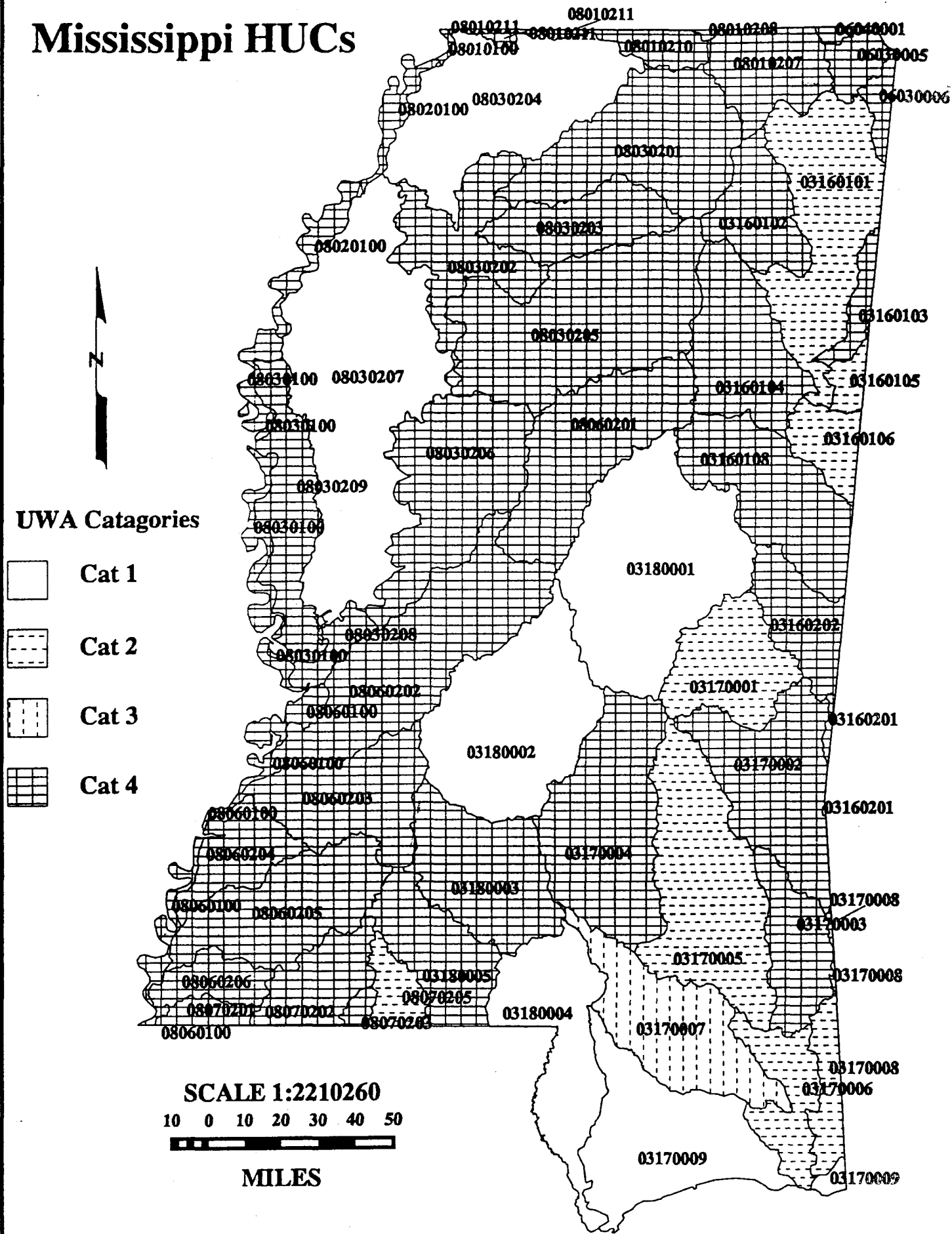


FIGURE 2

Table 1. Watershed assessment by 8-digit hydrologic unit.

	Hydrologic Unit Number	Hydrologic Unit Name	I Watersheds not meeting, or facing imminent threat of not meeting, clean water or other natural resource goals.	II Watersheds meeting goal including those needing action to sustain water quality.	III Watersheds with pristine/sensitive aquatic system conditions on federal, state, or tribal lands.	IV Watersheds where more information is needed to assess conditions.
1	03160101	Upper Tombigbee River				
2	03160102	Town Creek				
3	03160103	Buttahatchee River				
4	03160104	Tibbee River				
5	03160105	Luxapalila River				
6	03160106	Middle Tombigbee River				
7	03160108	Noxubee River				
8	03160201	Lower Tombigbee River				
9	03160202	Sucarnoochee River				
10	03170001	Chunky Rv./Okatibbee Ck				
11	03170002	Upper Chickasawhay Rv				
12	03170003	Lower Chickasawhay Rv				
13	03170004	Upper Leaf River				
14	03170005	Lower Leaf River				
15	03170006	Pascagoula River				
16	03170007	Black & Red Creeks				
17	03170008	Escatawpa River				
18	03170009	Jourdan River				
19	03180001	Yockanookany River				
20	03180002	Pearl Rv Above Strong Rv				
21	03180003	Middle Pearl River				
22	03180004	Lower Pearl River				
23	03180005	Bogue Chitto River				
24	06030005	Yellow Creek				
25	06030006	Bear Creek				

	Hydrologic Unit Number	Hydrologic Unit Name	I Watersheds not meeting, or facing imminent threat of not meeting, clean water or other natural resource goals.	II Watersheds meeting goal including those needing action to sustain water quality.	III Watersheds with pristine/sensitive aquatic system conditions on federal, state, or tribal lands.	IV Watersheds where more information is needed to assess conditions.
26	06040001	Kendrick Area				
27	08010100	MS River Above Horn Lake				
28	08010207	Hatchie River				
29	08010208	Porters Creek				
30	08010210	Wolf River				
31	08010211	Horn Lake Creek				
32	08020100	MS River Above Lake Beulah				
33	08030100	MS River Above Vicksburg				
34	08030201	Little Tallahatchie River Above Sardis Dam				
35	08030202	Tallahatchie River				
36	08030203	Yocona River Above Enid Dam				
37	08030204	Coldwater River Below Arkabutla Dam				
38	08030205	Yalobusha River Above Grenada Dam				
39	08030206	Upper Yazoo River				
40	08030207	Bogue Phalia River				
41	08030208	Lower Yazoo River				
42	08030209	Deer Creek-Steele Bayou				
43	08060100	MS River Below Vicksburg				
44	08060201	Upper Big Black River				
45	08060202	Lower Big Black River				
46	08060203	Bayou Pierre				
47	08060204	Coles Creek				
48	08060205	Homochitto River				
49	08060206	Buffalo River				
50	08070201	Bayou Sara				

	Hydrologic Unit Number	Hydrologic Unit Name	I Watersheds not meeting, or facing imminent threat of not meeting, clean water or other natural resource goals.	II Watersheds meeting goal including those needing action to sustain water quality.	III Watersheds with pristine/sensitive aquatic system conditions on federal, state, or tribal lands.	IV Watersheds where more information is needed to assess conditions.
51	08070202	Amite River				
52	08020203	Tickfaw River				
53	08070205	Tangipahoa River				

Watershed Restoration Priorities

Watershed restoration priorities were selected with special attention to watersheds most in need of restoration and protection through the year 2000. High priority watersheds were selected from the list of category I watersheds based upon the likelihood of targeted resources becoming available to address restoration and protection activities through the year 2000. (Examples include EQIP and 319 demonstration funds) Six watersheds were identified as high priority. Figure 3 is a map of the six category I watersheds selected for restoration and protection through the year 2000.

Hydrologic Unit 03170009

Jourdan River Watershed

#03170009	Counties	Hydrologic Unit Acres	Average Erosion Rate T/AC/YR	Watershed Stream Miles	
	Hancock		9.3		
	Harrison		1.5		
	Jackson		6.7		
	Lamar		3.4		
	Pearl River		4.9		
	Stone		6.2		
TOTAL		1,048,076		1,262	
		Cropland Acres/County	Pastureland Acres/County	Woodland Acres/County	Animal Waste Management Systems/County
	Hancock	30	14,640	90,700	6
	Harrison	0	7,492	109,300	6
	Jackson	1,576	11,548	150,200	1
	Lamar	769	23,576	159,700	31
	Pearl River	3,681	43,404	227,300	13
	Stone	769	12,719	108,300	6
TOTAL		6,825	113,379	845,500	63

Hydrologic Unit 03180004

Lower Pearl River Watershed

#03180004	Counties	Hydrologic Unit Acres	Average Erosion Rate T/AC/YR	Watershed Stream Miles	
	Hancock		9.3		
	Lamar		3.4		
	Marion		11.0		
	Pearl River		4.9		
	Walthall		13.4		
TOTAL		818,726		2,065	
		Cropland Acres/County	Pastureland Acres/County	Woodland Acres/County	Animal Waste Management Systems/County
	Hancock	30	14,640	90,700	6
	Lamar	769	23,576	159,700	31
	Marion	1,207	42,121	154,100	71
	Pearl River	3,681	43,404	227,300	13
	Walthall	4,223	50,602	137,700	121
TOTAL		9,910	174,343	769,500	242

Hydrologic Unit 08030204

Coldwater River Watershed

#08030204	Counties	Hydrologic Unit Acres	Average Erosion Rate T/AC/YR	Watershed Stream Miles	
	Benton		16.9		
	Coahoma		4.8		
	DeSoto		8.1		
	Marshall		13.5		
	Panola		11.5		
	Quitman		4.3		
	Tate		7.3		
	Tunica		3.0		
TOTAL		1,231,084		3,517	
		Cropland Acres/County	Pastureland Acres/County	Woodland Acres/County	Animal Waste Management Systems/County
	Benton	19,580	34,623	119,700	1
	Coahoma	300,739	2,797	48,500	0
	DeSoto	62,093	35,663	81,700	3
	Marshall	28,968	87,582	206,000	2
	Panola	95,987	73,399	174,000	0
	Quitman	146,679	4,006	21,200	0
	Tate	36,918	68,073	74,200	14
	Tunica	192,854	1,513	19,800	0
TOTAL		883,818	307,656	745,100	20

Hydrologic Unit 08030207

Bogue Phalia River Watershed

#08030207	Counties	Hydrologic Unit Acres	Average Erosion Rate T/AC/YR	Watershed Stream Miles	
	Bolivar		3.7		
	Coahoma		4.8		
	Humphreys		4.3		
	Issaquena		4.9		
	LeFlore		5.0		
	Sharkey		4.3		
	Sunflower		4.0		
	Tallahatchie		4.4		
	Washington		4.6		
	Yazoo		11.1		
TOTAL		2,021,427		5,799	
		Cropland Acres/County	Pastureland Acres/County	Woodland Acres/County	Animal Waste Management Systems/County
	Bolivar	390,653	10,759	25,000	0
	Coahoma	300,739	2,797	48,500	0
	Humphreys	155,854	3,030	26,000	0
	Issaquena	104,018	3,638	19,400	0
	LeFlore	240,060	4,283	52,900	0
	Sharkey	155,335	637	11,400	0
	Sunflower	305,041	8,049	38,100	1
	Tallahatchie	208,011	36,185	101,400	4
	Washington	292,158	8,151	23,900	0
	Yazoo	179,287	80,948	215,000	6
TOTAL		2,331,156	158,477	561,600	11

Hydrologic Units 03180001 & 03180002

Upper Pearl River Watershed

#08030001 & #08030002	Counties	Hydrologic Unit Acres	Average Erosion Rate T/AC/YR	Watershed Stream Miles	
	Attala		10.0		
	Choctaw		14.0		
	Copiah		5.5		
	Hinds		14.8		
	Kemper		4.8		
	Leake		5.5		
	Madison		13.5		
	Neshoba		32.3		
	Newton		0.6		
	Noxubee		5.4		
	Rankin		4.8		
	Scott		12.9		
	Simpson		11.0		
	Smith		2.3		
	Winston		3.9		
TOTAL		2,768,015		7,570	

		Cropland Acres/County	Pastureland Acres/County	Woodland Acres/County	Animal Waste Management Systems/County
	Attala	10,668	43,348	261,500	9
	Choctaw	1,285	18,997	158,800	10
	Copiah	4,652	71,329	261,600	21
	Hinds	31,647	124,985	204,400	6
	Kemper	596	53,499	286,900	12
	Leake	3,475	51,297	159,400	213
	Madison	46,479	74,469	150,900	2
	Neshoba	632	66,231	229,900	285
	Newton	3,555	52,325	209,900	174
	Noxubee	59,207	61,932	153,600	40
	Rankin	11,096	56,418	249,900	63
	Scott	6,096	53,342	169,900	403
	Simpson	2,566	56,070	13,900	182
	Smith	560	52,111	183,400	315
	Winston	2,838	45,271	165,500	30
TOTAL		185,352	881,624	2,859,500	1,765

Mississippi HUCs

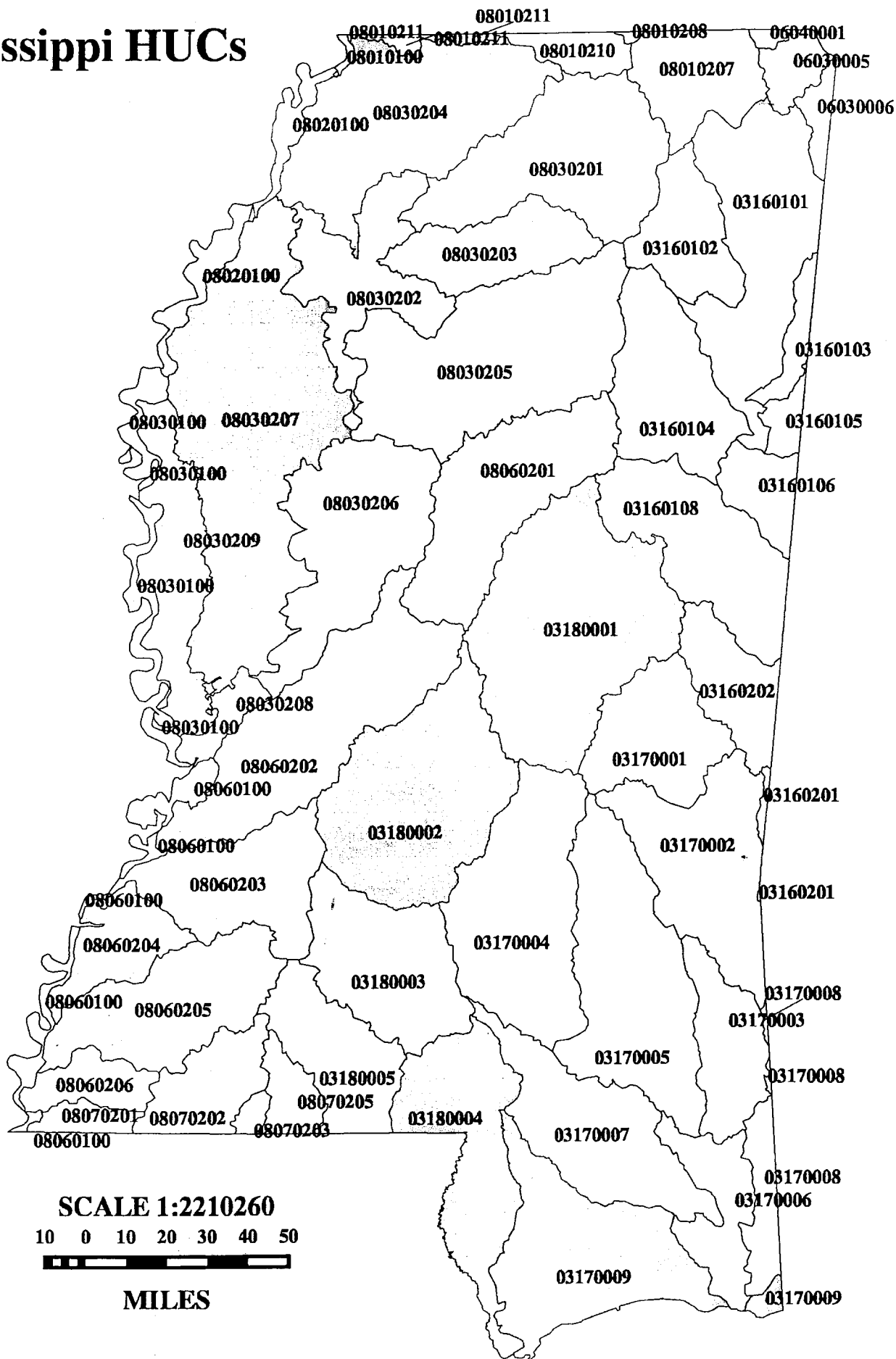


FIGURE 3